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The London Underground  
Railway Society

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### THE FUTURE OF THE TRANSPORT MUSEUMS

It is reported that the British Railways Board has made a loss during the past year of £90,000 on the three transport museums it runs - at York, Swindon and Clapham. This being the Age of the Law and the Profits (with emphasis always on the Profits), the situation is not to the liking of the Board, and it would seem that they would gladly close all three establishments if they dared. In fact, a BR official is on record as saying that the Board consider it is their duty not to waste money "on things like this which are not in the public interest"!

It is submitted that this remark as an example of fatuous idiocy is a classic of our time. Admittedly, the traveller, as such, gets no direct benefit from the maintenance of the museums, but it should always be borne in mind that travellers are also citizens and as such they have their cultural inheritance much enriched by the existence of places like Clapham.

Strangely enough, the statement referred to above was made in almost the same breath as another to the effect that the Board had a certain moral obligation to maintain the museums, so it is a little difficult to understand BR's true attitude to the problem - whether they really wish to dispose of all museums, or whether they are only attempting to do so because of political pressure to cut out all unprofitable enterprises. Whatever the reason, the present position is that the Board proposed to the Ministry of Transport during last November that a Treasury Grant should be obtained to make good the loss - a proposal which was evidently not favourably received - and they have since been engaged in discussions with other authorities, including the Science Museum.

For the present, then, it must be concluded that the future of the museums is in the balance, and this is a situation

which cannot be tolerated for one moment by any intelligent lover of transport. As discussions are in progress now, it seems useless to consider alternative means of support until such time as the official solution is announced, but a few suggestions referring to increasing the profitability of the establishments cannot be out of place, as this problem will exist whoever is in charge of them.

Firstly, then, might the admission charge be too high? It is traditional in this country that Museums are free, and while the majority of people will not object to paying a fee to see the things that interest them, the difference between nothing for other museums and 2/6d for Clapham is great enough to aggravate the public, and to keep some of them away. Also, a visit to Clapham is usually a family enterprise for a married man, and <sup>can</sup> become prohibitively expensive at half-a-crown per adult, when the reduced charges for children and the fares to and from the place are added.

Secondly, is it wise to close on Sundays? At one time, there was practically no public entertainment on Sundays, but the museums could be visited in the afternoons - and were so visited, by thousands. As a result, museum-going is still looked upon as a Sunday activity by many - but not it seems by British Railways. In the year since the large exhibits were opened to the public, 95,000 visitors have been to Clapham - how many more would have gone if they could have gone on a Sunday visit?

Then, have British Railways considered the possibility of running special excursions with combined fare/admission tickets from places remote from any of the museums? This has been done on a very limited scale for York and Swindon, but not, it is thought, for Clapham. It should be a very satisfactory way of increasing both rail traffic and museum attendance - many of those who have been to Clapham have travelled considerable distances to attend - very many more would do so if they could come on a specially organised trip with all the facilities laid on.

Finally, for the present, should Clapham be moved? To most transport enthusiasts it has been obvious ever since the place opened that a museum where the exhibits are largely of railed vehicles should never have been put in a building without rail access - particularly when at least half a dozen alternatives could have been made available in London. Lack of rails must add enormously to the expense of running the place.

THE PRESENT LONDON TRANSPORT  
STEAM LOCOMOTIVE FLEET

99

The present stock of steam locomotives in service with London Transport comprises eleven British Railways Western Region 0-6-0 pannier tanks. Details of these are as follows:-

<u>No</u>	<u>Built</u>	<u>Builder</u>	<u>Formerly</u>	<u>To LT</u>
L.89	1929	G.W.R.	G.W.R. (5775)	8. 8.1963
L.90	1930	North British	G.W.R. (7760)* (replacing GWR 7711)	14.11.1961 (7.10.1956)
L.91	1929	G.W.R.	G.W.R. (5757)* (replacing GWR 5752)	18.11.1960 (25.2.1957)
L.92	1929	"	G.W.R. (5786)	20. 4.1958
L.93	1930	Armstrong Whitworth	" (7779)	5.10.1958
L.94	1930	North British	" (7752)	1.11.1959
L.95	1929	G.W.R.	" (5764)	22. 5.1960
L.96	1930	North British	" (7741)	14.11.1961
L.97	1930	" "	" (7749)	11. 8.1962
L.98	1930	" "	" (7739)	4.12.1962
L.99	1930	Kerr, Stuart	" (7715)	24. 6.1963

All the above locomotives are of Western Region 5700 class 0-6-0 PT.

(\* Locomotives Nos 7760 and 5757 are the second engines to bear the numbers L.90 and L.91; the originals, Nos 7711 and 5752 respectively, were exchanged when heavy repairs became due.)

BOOK NOTES

London Transport Railways; A.E.Bennett & H.V.Borley: 1963.

An Amendment Sheet is now available for the above book. To obtain a copy, send 3 3d stamps and a foolscap stamped addressed envelope to H.V.Borley, 167 Cornwall Road, Ruislip, Middlesex.

A History of London Transport, Vol.1; T.C.Barker & M.Robbins; 1963. The draft Index to this book, to be published with Vol.2, is now available in advance to students and research workers only, free, in limited numbers. Apply to the PRO, London Transport, 55 Broadway, Westminster, London, S.W.1.

P.R.Davis

The experiments in public passenger service between Stamford Brook and Ravenscourt Park having been successful, the next stage was a more elaborate test. It had previously been made known that certain of the 1960 Cravens tube stock was to be converted to automatic operation, to work the shuttle service between Woodford and Hainault on the Central Line, and the conversion work was actually put in hand during the time the District Line experiments were taking place.

When the engineers were ready to install the equipment on the shuttle line, buses replaced trains between Woodford and Hainault for two days, the weekend of 4/5th April 1964, and the experimental trains commenced running automatically on the Sunday, which was just a few days short of a year after the District Line automatic service had commenced carrying passengers. This District service was, incidentally, withdrawn the same weekend, having served its purpose, but at about the same time further tests were commenced on the original section between South Ealing and Acton Town to ascertain the best acceleration and braking latitudes to be used on the system.

The trackside equipment installed on the Woodford and Hainault section is similar to that previously used, but the relay rooms for the control equipment have been set up on each platform of the stations concerned, comprising green plastic structures.

There are, of course, two main differences between the District and the Central Line experiments; the first affected only one train on one track running between two stations, whereas the latter embraces a complete service covering four miles of route and five stations - Woodford, Hainault, and between the three intermediate stops at Roding Valley, Chigwell, and Grange Hill. The other difference is in the stock itself; naturally, the District train was of sub-surface stock as already described, whereas on the Central, four trains of tube stock have been automated to maintain the service - each comprising two motor and two trailer cars between them. Three of these trains are indistinguishable, as far as their appearance and passenger accommodation is concerned, from those in normal service. The fourth train, however, has its driving car front sections at each end partitioned off from the rest of the passenger accommodation. In the separate compartments thus formed, the automatic driving and safety

signalling equipment is installed on racks and shelves - instead<sup>101</sup> of being stowed under seats or floor as on the other trains. This arrangement is to enable the engineers working on the system to carry out observations and tests of the equipment while the train is in operation.

It is very creditable that LT engineers needed only a year from the time of putting their first automatic train into full passenger service to getting this fully automatic shuttle into operation, and since the introduction of the service it seems that numerous passengers have been carried without any major difficulties coming to light.

So far as the passenger is concerned, there is little difference between manual and automatic operation; in fact, most reporters seem to agree that the ordinary traveller would not even be aware that the train was being automatically operated unless he was told - this is the strength of the achievement by LT's engineers during the past few years. All the work on equipping the trains has been carried out at Acton Works and some indication of the complexity of the job is given by the fact that nineteen miles of wire were needed to connect up the apparatus.

The existing colour-light signalling on the Woodford-Hainault section is being retained, although it is not used by the automatic trains, as it is needed for manually-operated trains from other parts of the Central Line going to and from Hainault depot - and also, of course, to enable the automatic trains to be operated manually in an emergency or breakdown.

The ultimate object of these experiments is to ascertain whether it will be possible to operate the Victoria Line wholly automatically. As it is not due to open until 1968, the progress made so far would seem to augur well, and would seem to indicate that the aim should be achieved fairly easily, though there has been no official confirmation of this view as yet.

#### Notes

Correction Due to a transcription error, the word "western" appeared twice in the first article where "eastern" should have been, implying that the District Line experimental train had been reversed from its normal direction of operation - this was not the case; please amend - p.78, para. 3, l.2; p.78 para. 4, l.2.

Coming shortly A further article will deal with the technical aspects of the new system.

Q16 Are there any tunnel stations on the Bakerloo Line which will take 8-car trains?

A Swiss Cottage, St Johns Wood, and Baker Street (Platform 7).

Q17 How long is it since Edgware line trains ceased to stop at Mornington Crescent?

A Non-stopping began on 1-12-1924.

Q18 Is the centre tunnel between the running tunnels at the end of the platform at Euston (Northern Line) part of the new works for the Victoria Line?

A The new centre tunnel between the running tunnels at the Camden Town end of the Charing Cross line platforms will lead to the lower escalator landing of the new Northern Line escalators.

Q19 Has the tall semaphore signal above the northern tunnel mouths of the Hendon tunnels of the Northern Line anything to do with the Underground?

A This hand-operated signal, which has been there for many years, is used in the motormen's eyesight tests.

Q20 Will the pre-1938 stock now being withdrawn be used for further service as ballast motor cars, etc?

A It seems likely that this will happen, both to replace existing units which have reached the end of their economic life and also for Victoria Line service.

Q21 Is it proposed to use the closed circuit television system on stations other than Holborn?

A The Holborn installation is experimental and its worth and cost are still under study. If it is considered worthwhile it will be used in improved form at the important interchange stations on the Victoria Line.

Q22 Are tube platforms of uniform length, or are some longer than others?

A Lengths vary considerably. The Aldwych platform is only 250ft and the Central Line is the only line with all its platforms long enough to take 8-car trains.

Q23 Which is the highest station served by tube lines?

A High Barnet, about 325ft above sea level.

Q24 Where is the sharpest curve on the tube system?

A Caxton Curve, between Shepherds Bush and White City westbound, 3 chains radius.

Q25 Are the steepest gradients to be found on the artificial humps at station approaches and exits?

A The Waterloo and City has a stretch of 1 in 30 down, and the humps on the Central and Northern Lines also have this gradient in places.

Q26 Which was the first stock to be fitted with automatic doors?

A Air doors were first used on the "Cammell Laird" trailers, delivered from 1920 onwards for the Piccadilly Line. Original gate stock motor cars were converted to run with them.

Q27 What is a tube train's maximum speed both practical and theoretical?

A This depends on so many factors; gradient, load, weather conditions, type of motors, etc. It is doubtful if any trains in normal service ever exceed 50 mph, even in favourable circumstances, but 55-60 mph could be regarded as the absolute theoretical limit.

Q28 Are disused stations like Down Street and City Road ever used after hours?

A Closed stations are used for various purposes, mainly for storage of equipment, records, etc. Access can usually be gained by authorised persons at any time, but it is not possible to give full details here.

Q29 What is the object of the five platform faces at Golders Green?

A The 1907 station at Golders Green consisted of:- an arrival platform on the south (North End Road) side; a single track; an island platform; another single track; and an arrival platform on the north side which had a siding road behind it for part of its length. Trains from London arrived on either track and passengers alighted on the outer platforms, departing passengers boarding from the centre island. This gave complete flexibility of working with segregated passenger flows, and the layout was adaptable to through working when the time came. For the Hendon extension in 1923, the siding behind the northbound platform was extended to join the southbound road of the extension and a platform face made to serve it, so that the northernmost platform became an island. The track on its other face became a terminal road with connections to both through roads at each end; the track between the southern platform and the old island platform became the new northbound road. Thus the terminal centre road could be used either for trains reversing from the London direction or for trains turning back to the Edgware direction (in practice it is normally only used for reversing trains from the south). A reversing train can be held in this centre road for a connecting train and passengers need only cross the platform to reach it. The arrangement also allows fast clearance of northbound trains through the station by segregating the alighting passengers from those boarding, the doors on the island side being opened after most alighting have left.

The London Transport Board's report on its lost property service for 1963 reveals a curious inconsistency regarding the umbrella-losing habits of Londoners when compared with their capacity for losing other things, and LT appeal to their passengers to be more careful with these particular objects.

Out of a total of almost 358,000 articles left behind by passengers on buses, coaches and trains during the year, more than one in four - or 96,551 to be exact was an umbrella! This figure was 15% higher than in 1962, and was in sharp contrast to all the other items, all of which indicated a less forgetful trend during the year.

Pairs of gloves which found a temporary home in the Lost Property Office in Baker Street fell by 10% to 47,200; single gloves by 12% to 15,600; books by nearly 7% to under 20,000; spectacles by 6% to less than 10,000; while items of value such as handbags, wallets and cash fell by 6% to 46,000.

A London Transport spokesman, commenting on the 260 umbrellas left behind every day, said that an analysis of the annual figures since the war showed that it was not the weather which accounted for the steep rise in losses that has taken place - 1963 was drier than 1962 for instance. It is now thought the increase is accounted for by a growth in the umbrella-carrying habit over the past few years.

A third of all the articles received at the LPO were restored to their owners, but while seven out of every ten cases or bags and half the books were reclaimed, less than ten people in every hundred took the trouble to claim back lost gloves.

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#### ELECTRIC TRANSPORT DEVELOPMENT SOCIETY

With effect from the 9th May 1964, and in response to many suggestions, the London and Home Counties Electric Traction Society has changed its name to the Electric Transport Development Society and extended its scope to cover national activities in the advocacy and promotion of modern electric transport.

Enquiries will be welcomed by the Honorary Secretary at 2 Chesterfield Road, London, E.10. Subscription Rates are 15/- per annum, with an admission fee of 5/-, or, for Junior Members (under 18) 7/6d with no admission fee.

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The Society was founded in 1961, to cater for the interests of all those studying the London Underground system in any way, and since then has arranged almost one hundred events of interest to enthusiasts, students and modellers. Much research has been conducted by members, and a great deal of valuable information brought to light as a result. So far, one book has been published, as a joint venture, and it is hoped that others will follow in due course. A monthly journal, *Underground*, is also published, available to members only, and this reaches them on the first of each month; at present it is a duplicated magazine, but from January 1965 it is hoped to produce it by a photo-litho process.

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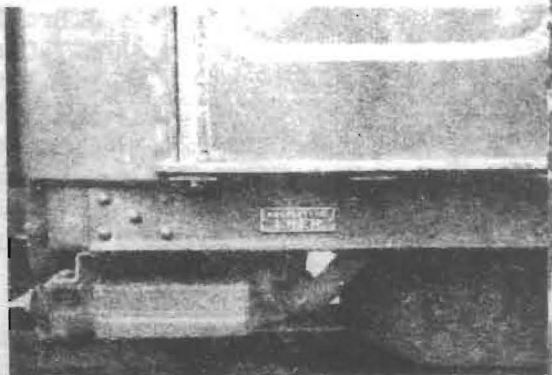
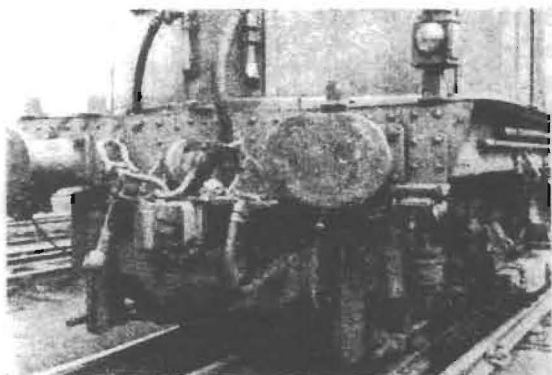
1st July 1964

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4160 at the rear of a Putney to Aldgate train, 3rd August 1962

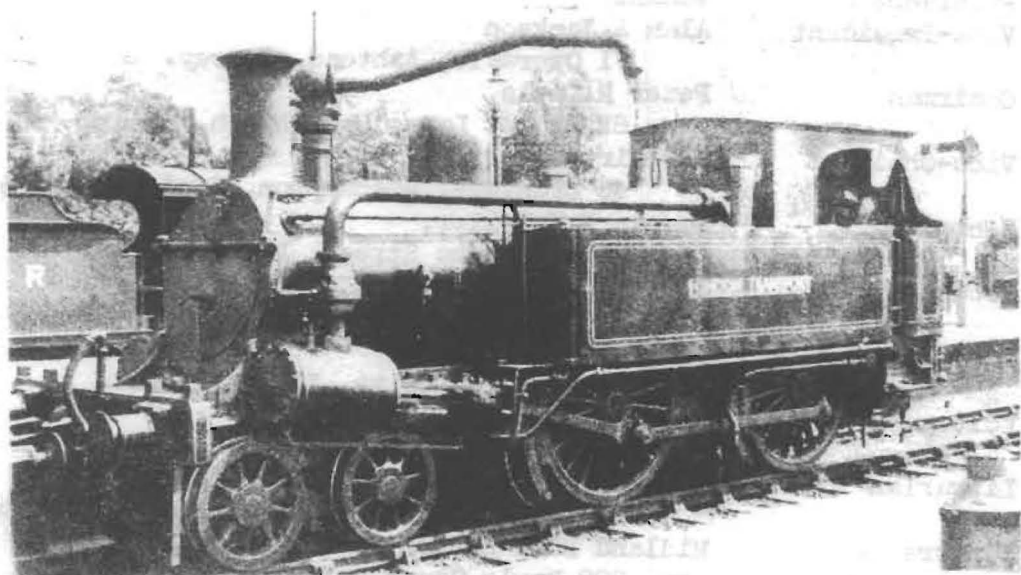


When ? - and - Why ?

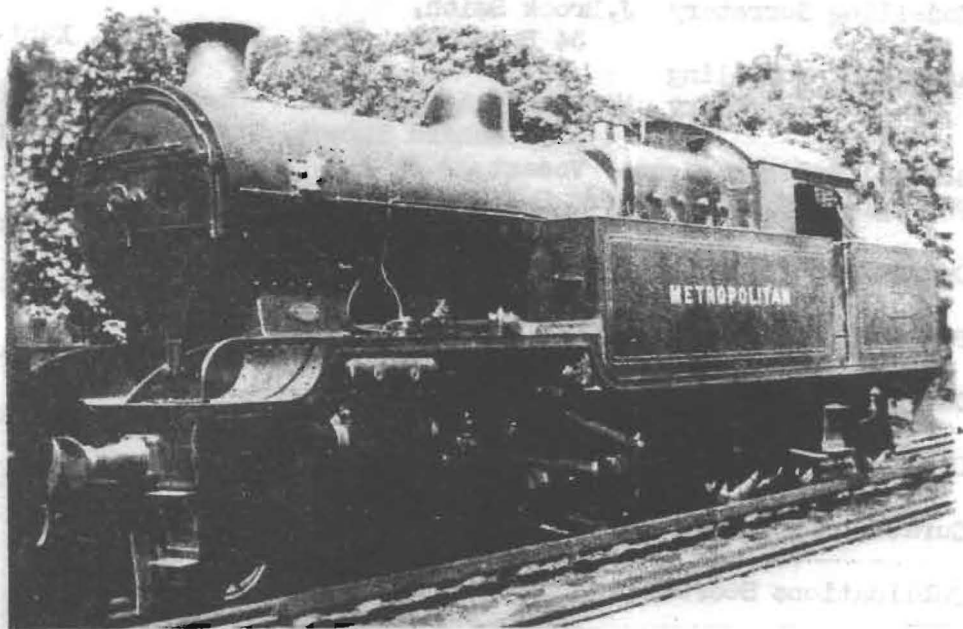
Supplement to Underground  
Summer 1964

The pictures on this side are from photographs by P.W.Boulding. (The ex-Metropolitan Electric locomotive is No 1; the tube car is No 012333)

The pictures opposite (of Nos 23 and 103) are from photographs by the late S.Oberne.



Aylesbury, 18th June 1934



Rickmansworth, 14th July 1928

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1st July 1964.

The Annual Report and Accounts of the London Transport Board for 1963 were published by Her Majesty's Stationery Office on 4th June 1964 - price from HMSO or booksellers 7/-.

This is the first Annual Report of the new Board, and despite the high price makes a valuable addition to any Underground enthusiast's library. Because it is the first, the report contains, in an introduction, an informative description of the new undertaking, including historical background going back to the formation of the old London Passenger Transport Board in 1933. The statutory framework within which the Board operates is also given in some detail, information being given on areas covered by the Board's services, their monopoly rights, fare structures and so on, and financial obligations to the Treasury through Parliament.

Naturally, very full information is given on the work of the Board during the year under review, with many graphs and schedules appearing in support of the written matter - in addition to the accounts for the year which appear in full.

During the year, the number of passengers carried by the Underground increased by 0.9% to 673 million - in contrast to the road services which showed a reduction in passengers overall of 2.2%. Car miles worked by LT stock also increased, by 0.8%, and the total mileage run by LT trains during the year was 225,070,000, in car miles, or 30,000,000 train miles.

Passenger Receipts for the year were up to some £93m from less than £91m in 1962, but expenditure was also greatly increased, so that the balance of revenue for the year, after providing for depreciation and meeting interest charges was £2.1m. for the Board as a whole; this is not considered an adequate surplus, as an annual target is being aimed at of £4m. Passenger receipts on the railways increased from less than £30m in 1962 to over £32m in 1963. This increase, of course, reflects the increases in fares imposed during the year, as well as the larger number of passengers carried.

On the dissolution of the British Transport Commission, of which the London Transport Executive formed a part, the assets of the Commission had to be divided between the new Boards and Companies formed to take over its work, and the figure agreed for the value of the assets taken over by LTB is £161,830,904. This sum is the Board's commencing capital debt, and interest is paid thereon to the Treasury at 3.4%.

NF 287 Hornchurch Urban District Council have announced that the pavement outside Upminster station, running south from the frontage (and long a pedestrian bottleneck) is to be widened.

NF 288 In a Parliamentary Reply, given in the Commons on 12-2-1964, the Minister of Transport stated that London Transport was considering the extension of the Victoria Line to Brixton, and a possible link between Aldwych and Waterloo - but the Board was waiting for the results of the London Traffic Survey before proceeding with firm proposals.

NF 289 The first set of condemned Piccadilly Line stock bound for George Cohen's breaking site at Kettering left West Ruislip at 11 a.m. on 3-2-1964. It was routed via Neasden and Brent, and comprised 3144-3126-3091-3118-3217-3053-3285.

NF 290 A set of F stock coaches left Neasden on 14-2-1964, believed to be bound for Llanelly via West Ruislip, Southall, (leaving the latter on 17-2-1964), Swindon and Gloucester. Cars in the set comprised 4626-8006-8525-8528-8001-4639.

NF 291 Early in 1964, two 7-car sets of Q23/Q27 stock were stored at West Ruislip depot; one set, stored next to two BR match wagons, comprised 4161-4229-4239-4174-4210-4218-4281.

NF 292 The last 1962 tube stock unit to enter service in 1963 was 1712-2712-9713-1713, its first day in passenger service being 24-12-1963.

NF 293 The last A stock set to enter service in 1963 was 5230-6230-6231-5231, which went into use on 13-12-1963, and completed the orders for this stock.

NF 294 A photographer, Michael Isles, attempting to get a picture of the Hammersmith and City over-run at Hammersmith in March, was warned off by a policeman on the grounds that it was "against defence regulations"! IT later admitted this was not so, but pointed out that official permission was needed to take photographs.

NF 295 On 18-1-1964 a middleaged man was twice found nude on the tube. First found at Piccadilly Circus, he was taken to hospital by the police, but escaped from there and was later found in the same condition again at St Johns Wood.

NF 296 A new subway has been built at South Kenton station; as the railway is above road level here, the old footbridge was unusually high, and has been a cause of complaint for 30 years. The new subway benefits non-travellers also, as they can now proceed from west to east of the railway on the level.

NF 297 A Metropolitan A stock car has been seen with a curious box in the passenger compartment; this could be either a loud-speaker or a photo-electric cell. Further information welcome.

The Hammersmith & City Railway, the first London Underground branch line, was a hundred years old on June 13th 1964. It was opened 17 months after the Metropolitan Railway - the world's first Underground - and was designed from the start as a feeder or branch line to bring traffic to the earlier line. A joint Metropolitan and Great Western venture, it was nominally a separate company (incorporated on July 22, 1861) and had its own board of directors; but the Chairman, John Parson, was a Metropolitan nominee. The Engineer was John Fowler, also Engineer of the Metropolitan Railway.

The Hammersmith & City ran from a point on the Great Western Railway about a mile out of Paddington, known as Green Lane Junction (where Westbourne Park station now stands), and described an arc to the south-west to end on the north side of the Broadway at Hammersmith. There were intermediate stations at Notting Hill and at Shepherd's Bush near Shepherd's Bush Green. The length from Green Lane Junction to Hammersmith, was 2m. 38ch. and the double track line was of mixed gauge to accommodate the 7ft. 0 $\frac{1}{2}$ in. broad gauge Great Western trains as well as the 4ft. 8 $\frac{1}{2}$ in. standard gauge trains of the Metropolitan.

A branch line, opened on July 1, 1864, left the main Hammersmith & City route at Latimer Road Junction and ran for half-a-mile southwards to join the West London Railway at Uxbridge Road Junction. The West London Railway, which operated from Willesden to Kensington, had been opened in 1844 but had never been successful in attracting traffic. To make it more useful, the West London Extension Railway was built to carry the West London on from Kensington to Clapham Junction, giving a through link between railways north and south of the river. This was opened in March 1863. The West London took on a new lease of life with the opening of the Hammersmith & City and was to see some unusual services, such as regular trains between Brighton and Paddington.

The Great Western Railway supplied broad gauge steam trains to work the Hammersmith - Farringdon Street services from the opening until the Metropolitan took over the working on April 1, 1865. This was after the famous quarrel between the G.W.R. and the Metropolitan had been patched up. Soon afterwards, in June 1865, management of the Hammersmith & City was placed in the hands of a joint committee of the G.W.R. and Metropolitan. The Metropolitan used standard-gauge rolling stock, but the G.W.R. continued to provide broad gauge trains, which ran between

Kensington and Farringdon Street by way of the Latimer Road Junction. These G.W.R. trains were extended to Aldersgate on March 1, 1866, and to Moorgate on July 1, of the same year.

One agreement arising from resumed co-operation was that the G.W.R. should lay two extra tracks between Paddington and Green Lane for use by the Hammersmith & City trains, which had caused some congestion on the G.W.R. main-line approaches to Paddington. When this work was finished, the two companies took a joint lease of the line from July 1, 1867. There was still congestion at Westbourne Park, where the Hammersmith & City crossed the G.W.R. on the level, and this led to the construction of a subway in 1878 to take the Hammersmith & City under the Great Western.

In August, 1868, it was agreed that the broad gauge rails between Latimer Road Junction and Hammersmith, which had not been used by passenger trains since March, 1865, should be lifted. This was a preliminary to the abandonment of the broad gauge on the main Metropolitan Line, on which G.W.R. broad gauge services to Moorgate ceased on March 15, 1869. Soon after this, the remainder of the broad gauge tracks on the Hammersmith & City were removed.

The Hammersmith & City saw many through services in the remainder of the century. For example, on August 1, 1872, the G.W.R. began to operate trains on what was to become known as the "Middle Circle" route. Starting from Moorgate, they ran over Metropolitan and Hammersmith & City tracks to Latimer Road and then, through Kensington (Addison Road), on to the District Line to Mansion House. The route was reduced to the Moorgate - Earl's Court section on July 1, 1900 and from February 1, 1905 the G.W.R. service was replaced by Metropolitan trains between Aldgate and Addison Road.

In the City, a Junction between the Metropolitan and Great Eastern Railways was opened at Liverpool Street on February 1, 1875, and Hammersmith trains worked into Liverpool Street (G.E.R.) station. On July 12, 1875, they were extended to Bishopsgate (Met.) station, opened on that day. Bishopsgate was renamed Liverpool Street on November 1, 1909.

The Metropolitan Railway began running through trains between Moorgate and Richmond on October 1, 1877. These used the Hammersmith & City Railway and the connecting link which the London & South Western Railway had built to its Richmond line at Hammersmith. On January 1, 1894, the G.W.R. took this



service over and continued to run it until December 3, 1906. It was then replaced by a Richmond - Notting Hill service which lasted until December 31, 1910.

Another Metropolitan service of interest was that from Hammersmith by way of the northern section of the Circle line and the East London Line to New Cross on the South Eastern Railway. This steam service continued from October 6, 1884, until December 2, 1906. The next day an electric service began to run between Hammersmith (Met.) and Whitechapel (District), and this continued until March 31, 1913.

Trains from Hammersmith were extended from the City to East Ham on March 30, 1936, and began running through to Barking on May 4 of the same year.

On October 21, 1940, after the connecting spur between Latimer Road station and Uxbridge Road Junction had been badly damaged by enemy action, the London Passenger Transport Board (as it then was) withdrew the Metropolitan trains which had been running between Kensington (Addison Road) and Edgware Road and the service has never been resumed. Kensington (Addison Road), renamed Kensington (Olympia) on December 19, 1946, now sees London Transport trains only when exhibitions are held at Olympia for which a shuttle service from Earl's Court and High Street Kensington is operated by the District Line, except that as a temporary measure London Transport are also running a District Line service from Olympia to High Street Kensington for passengers on certain L.M.R. sleeper car services which are being diverted to Olympia while Euston station is under reconstruction.

At the present time, Hammersmith & City trains run between Hammersmith and Whitechapel, but are extended to Barking in the peak hours.

The services making use of the Hammersmith & City might have been extended still further. In 1882 an Act was obtained for a line between Latimer Road and the G.W.R. station at Acton, to be known as the Latimer Road & Acton Railway. Some work was done on this railway but money seems to have been difficult to obtain and the scheme was officially abandoned by an Act of 1900.

Parliamentary approval for the electrification of the Hammersmith & City was obtained in an Act of 1902, and a power station was built by the G.W.R. at Park Royal for the purpose. The line had some electric trains from November 5, 1906 and the whole service between Hammersmith and the City, and from Addison Road to the City, was electrified by January 1, 1907.

The stations on the line, west of Paddington, are Royal Oak, opened by the G.W.R. on October 30, 1871; Westbourne Park, opened on February 1, 1866; Ladbroke Grove, opened as Notting Hill on June 13, 1864, known as Notting Hill (Ladbroke Road) between 1869 and 1880, renamed Notting Hill & Ladbroke Grove in 1880, retitled Ladbroke Grove (North Kensington) in 1919, and finally named Ladbroke Grove from 1938; Latimer Road, opened on June 13, 1864 and re-opened on a new site on April 1, 1914; Shepherd's Bush, opened on a new site on April 1, 1914, when the old Shepherd's Bush was closed; Goldhawk Road, opened on April 1, 1914; and Hammersmith, where the original terminus opened on June 13, 1864, and the present station on December 1, 1868.

There was also a station at Wood Lane, opened on May 1, 1908, but closed from November 1, 1914 except for special occasions. It was renamed White City on November 23, 1947 and finally closed on October 24, 1959.

The steam-hauled rolling stock of the Hammersmith & City was of normal Metropolitan or Great Western pattern. On electrification some special "joint" stock was built, finished in Metropolitan style and maintained by the Metropolitan. All cars were of the open saloon type and were in three-car units consisting of a motor car, trailer and driving trailer. The motor cars each had four 150 h.p. motors. The line is now worked by trains of "O" and "P" stock which entered service between 1937 and 1939.

The Hammersmith & City had the first modern "surface stock" trains to be fitted with air-operated doors. These were trains made up of "M" and "N" class cars, built in 1935, which ran on the Hammersmith & City for a time when new. These cars later became part of the "Q35" stock.

The name "Hammersmith and City" has been out of use for many years so far as the public are concerned, and operationally the line has been treated as part of the Metropolitan Line (No.1 Section), being described therein as the Hammersmith Line. It is, therefore, interesting to note that, as recently as April 1964 the name has reappeared on the route diagrams in Circle and Hammersmith and City Line trains - helping considerably to sort out the complexities of the Metropolitan Line for those passengers unfamiliar with the Underground system.

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Editor's Note For a detailed history of the H & C, by Charles E. Lee, see Railway Magazine, June 1964, pp.472-479.

Friday 10th July, 6.45 p.m. A Study Tour of the Diversion Works on the Metropolitan between Aldersgate and Moorgate. The scene here has greatly changed since the Society's last tour. Meet in the Metropolitan Booking Hall at Moorgate.

Saturday 18th July Visit to Cromwell Road Signal Box.

Names to the Secretary at 4 Southcombe Street, London, W.14, accompanied by a stamped addressed envelope, at once please.

Sunday 19th July FAMILY OUTING. As anticipated, this will take the form of a trip to Brighton, with travel in both directions via Liverpool Street and the East London Line - thus commemorating the old Liverpool Street-Brighton service of the London, Brighton and South Coast Railway. Please note that the train does not pick up at Liverpool Street as it only enters the station to reverse; two meeting places have, therefore, been arranged - 8.45 a.m. in the Booking Hall at Loughton, and 9.15 a.m. in the Booking Hall at Stratford. Tickets must be booked in advance, and fares are 14/6d Return from Loughton or 14/- Return from Stratford (Half Fare for children between 3-14 years, children under 3 free). Orders should be sent to M.T. Connell, 5 Trenchard Street, Greenwich, London, S.E.10, accompanied by the appropriate remittance and a stamped addressed envelope, to reach him by Monday 6th July - but please book as soon as possible. There will be reserved accommodation on the train in both directions, and about eight hours will be spent in Brighton. It is planned to visit Volk's Electric Railway immediately on arriving in Brighton, and the rest of the day will be left free to enable our members and their families and friends to spend as they wish. The party for the return journey will assemble at Brighton station at 7.15 p.m. sharp.

Previous Family Outings have been very successful, and well supported. Please help to make this one as great a success as the others; come, bringing your family and as many friends as possible. And don't forget - this sort of trip is the only easy way these days of travelling over the curve from the Great Eastern main line on to the East London tracks at Shoreditch.

#### Advance Notices

Saturday 19th September Visit to the old Channel Tunnel workings at Folkestone. Details are not yet available, but the party will probably leave Charing Cross about mid-day, and the trip will probably take about six hours altogether. Total coast, excluding food, is not likely to exceed £1.

Names should be sent to the Editor, at 62 Billet Lane, Hornchurch Essex, accompanied by a stamped addressed envelope. (Note - will those who gave their names in for this visit at the meeting on the 12th June, please re-apply. The Editor is not certain that he recorded all the names of those wishing to go! Apologies for the inefficiency.)

Friday 11th September On this date a Paper will be read to the Society by Hugh Douglas, author of "The Underground Story", entitled "The Building of the Metropolitan Railway - opened in 1863". This is an important paper, and should be heard by all those interested in the Underground - make a note of the date now.

Friday 9th October will be the occasion of a talk to the Society by B.P.Pask of The Transport Ticket Society, on a subject relating to Underground tickets. Details will follow later.

#### SOCIETY NOTICES

Changes in Officers At a recent Committee Meeting, several changes in Officers were made. A complete list of the TLURS Committee and Officers is published in the inset to this issue of the journal, but the changes are summarised here for quick reference.

Tony Milne has resigned as Assistant Secretary - Photograph Sales, and this post has been taken over by David L. Waddingham under the new title of Photograph Sales Officer; Malcolm Connell has resigned from the position of Publicity Officer, which has been taken over by Chris Gooch; Malcolm Connell has been appointed Assistant Modelling Secretary; also, two offices have had their titles changed, though they are still held by the same members - Joe Brook Smith is now Modelling Secretary instead of Assistant Secretary - Modelling, while Roy Labrum now holds the position of Registrar instead of being Assistant Secretary - Membership; the duties in the last two cases remain unchanged of course.

In addition, three new offices have been created. The Society has for some time owned a fair number of tickets, which have been kept by the Curator - Historical Relics as part of his duties. Now Ian Lawson has been appointed to the post of Curator of Tickets, and has taken over the collection, which he hopes to expand. An office of General Sales Officer has also been created, and it is hoped to announce an appointment to this shortly. Lastly, the duties relating to the stands at Exhibitions are to be taken over by an Exhibition Organiser as soon as one can be found - any volunteers?